



## NSMA Ex Parte

On the subject of Wireless Strategies Inc. and  
Innovation in the Part 101 Bands  
May 20, 2010

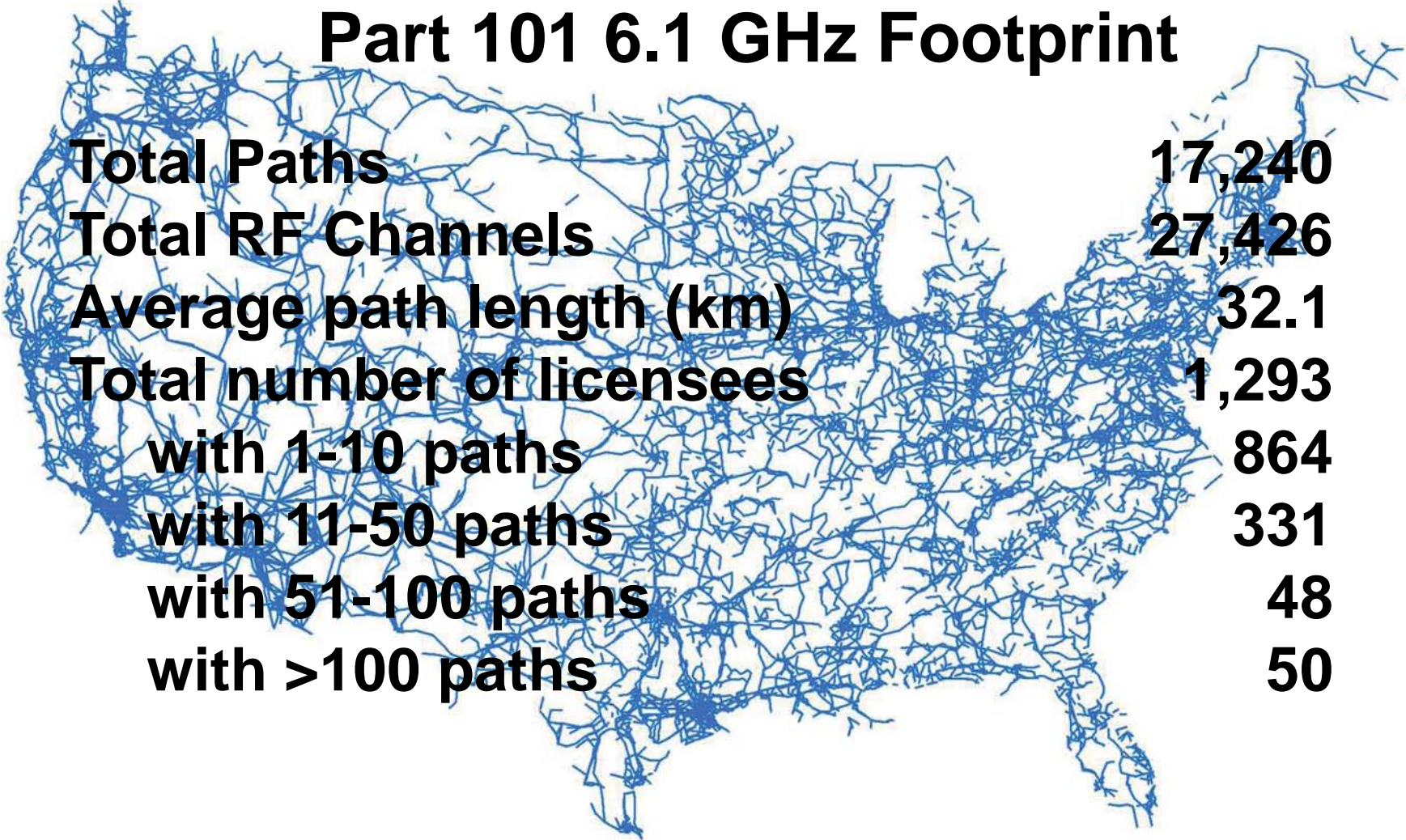
# NSMA encourages innovation





NSMA encourages spectrum re-use and sharing

## Part 101 6.1 GHz Footprint



|                                  |               |
|----------------------------------|---------------|
| <b>Total Paths</b>               | <b>17,240</b> |
| <b>Total RF Channels</b>         | <b>27,426</b> |
| <b>Average path length (km)</b>  | <b>32.1</b>   |
| <b>Total number of licensees</b> | <b>1,293</b>  |
| <b>with 1-10 paths</b>           | <b>864</b>    |
| <b>with 11-50 paths</b>          | <b>331</b>    |
| <b>with 51-100 paths</b>         | <b>48</b>     |
| <b>with &gt;100 paths</b>        | <b>50</b>     |

# Coordination activity for point-to-point microwave paths

| Type                                      | May 06 –<br>Apr 07 | May 07 –<br>Apr 08 | May 08 –<br>Apr 09 | May 09 –<br>Apr 10 |
|---|--------------------|--------------------|--------------------|--------------------|
| <b>Part 101</b>                           |                    |                    |                    |                    |
| <b>Point-to-Point<br/>Microwave Paths</b> | <b>12,881</b>      | <b>16,235</b>      | <b>14,718</b>      | <b>34,140</b>      |
| <b>Part 74</b>                            |                    |                    |                    |                    |
| <b>Point-to-Point<br/>Microwave Paths</b> | <b>1,763</b>       | <b>1,680</b>       | <b>1,726</b>       | <b>1,389</b>       |
| <b>Total</b>                              | <b>14,644</b>      | <b>17,915</b>      | <b>16,444</b>      | <b>35,529</b>      |

# NSMA Perspective

- WSI submissions are diametrically opposed to Fixed Service use of Part 101 spectrum for point to point operation

| WSI                             | vs. | Fixed Users                                    |
|---------------------------------|-----|--|
| Point to multipoint             |     | Point to point                                 |
| Short haul at 6 GHz             |     | Long haul critical links                       |
| Unlicensed operation            |     | Licensed operation                             |
| Optimized for a single operator |     | Optimized for sharing among multiple operators |

- WSI proposal is detrimental to:
  - Mobile broadband
  - Public Safety
  - Critical Infrastructure
  - Satellite earth stations

# Issues with WSI proposal

Spectrally inefficient

Frequency coordination conflicts

Anti-competitive

Extensive rule changes

# WSI proposal is spectrally inefficient

- Reduced antenna standards
- Use of excessive transmitter power
- Short haul paths in long haul spectrum
- TDD operation undermines FDD
- Unlicensed emitters

# WSI proposal makes frequency coordination impossible

- TDD in a band with FDD main usage causes frequency plan conflicts (bucking or high/low conflicts)
- Small antennas with high side lobe emissions
- Need for high power transmitters amplifies the challenge
- Large numbers of point to *multipoint* transceivers
- The benefits that WSI would enjoy shift the cost of coordination to traditional Fixed Service operators



# WSI proposal is anti-competitive

- Supposed “concurrent coordination” concept pre-empts other users from constructing in the immediate area
- Single service provider per channel in a given area is required to realize efficiencies claimed
- Secondary or unlicensed usage is not viable if public safety and other critical services are involved

# WSI proposal requires extensive rule changes

- Not a simple rule change, this is an entire reallocation of the bands
- Partial listing:
  - Allocation to Fixed Service for specified fixed points (2.1)
  - Licensing every transmitter (101.21)
  - Frequency coordination procedures (101.103)
  - Minimum necessary power for communications (101.113, and Communications Act)
  - Minimum antenna size (101.115)
  - Minimum payload capacity (101.141)
  - Channel pairing (101.147)

How has WSI responded?

# NSMA Recommendation

- NSMA requests that FCC dismiss the WSI petition
  - WSI proposal is adverse to Fixed Service in Part 101 bands and Fixed Satellite Service in Part 25
- Technical evaluation should be performed
- Innovation of this type should be done in appropriately allocated spectrum
  - Avoid jeopardizing incumbent operators or new operators wishing to utilize Part 101 spectrum
  - Other spectrum is more appropriate for this experimentation (WCS, LMDS, ISM, BRS/EBS, etc.)



Thank You